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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/023,966 | 12/18/2001 | Trent S. Herman | 1-23101 | 6689 |

4859 7590 08/05/2004

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| EXAMINER |
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LUK, EMMANUEL S

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| ART UNIT | PAPER NUMBER |
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1722

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,966

Applicant(s)

HERMAN, TRENT S.

Examiner

Emmanuel S. Luk

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 112

2. Claims 1, 5 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is an intended use of the device in a casting apparatus that includes a definition of the casting apparatus. However, there is further a definition of the claimed extraction device that is claimed to be disposed in the stationary mold section during casting of a cast part. It is unclear if there is a combination of the claimed invention. Examiner in interpreting the claimed structure will determine the claimed structure is positioned in a generic mold half.
3. Claims 4, 11, 17 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: a manually operated lever, a lock, a plate, a pin and at least first threaded fastener.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1, 2, 4-5, 7, 9 and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catinella et al (3807682).

Catinella teaches the claimed apparatus having an extraction device (30) to remove cast part (17), including a moveable mold section (11), a stationary mold section (12), the extraction member moveable between a first and second position (Fig. 1 and 2), the extraction member is disposed in a cavity (16) provided in the mold section. The extraction member includes a lever (25), a lock (36), a plate (42), a pin (33a), and at least a first threaded fastener (26) to releasably secure the extraction member in the mold. The pin acts as a threaded fastener as it extends through the lever, lock and plate and the plate, lever and lock are releasably secure to the mold.

Catinella fails to teach a manually operated extraction device and a second threaded fastener in the plate.

MPEP 2114.04 states that for automating a manual activity:

In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958) (Appellant argued that claims to a permanent mold casting apparatus for molding trunk pistons were allowable over the prior art because the claimed invention combined "old permanent-mold structures together with a timer and solenoid which automatically actuates the known pressure valve system to release the inner core after a predetermined time has elapsed." The court held that broadly providing an automatic or mechanical means to replace a manual activity which accomplished the same result is not sufficient to distinguish over the prior art.).

In this case, the claimed invention depicts manually operated extraction devices whereas Catinella teaches automated means for operating the extraction device.

In regards to the second fastener, Catinella teaches a first fastener disposed in the plate, it would be a multiplication of parts to have a second threaded fastener disposed in the plate.

It would have been obvious to one of ordinary skill in the art to modify Catinella with manually operated extraction means because it allows for extraction of the product with a simpler apparatus and a second threaded fastener to further secure the plate to the stationary mold.

7. Claims 3, 6, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catinella et al (3807682) as applied to claims 1, 2, 4-5, 7, 9 and 11 above, and further in view of Diamond (6245277 B1).

Catinella teaches the claimed apparatus having an extraction device (30) to remove cast part (17), including a moveable mold section (12), a stationary mold section (11), the extraction member moveable between a first and second position (Fig. 1 and 2), the extraction member is disposed in a cavity (16) provided in the stationary mold section. The extraction member includes a lever (25), a lock (36), a plate (42), a pin (33a), and at least a first threaded fastener (26) to releasably secure the extraction member in the stationary mold.

Catinella fails to teach plurality of extraction devices disposed in the stationary mold section and a shoulder for supporting the extraction member on a ledge of the stationary mold section.

In regards to claim 8, the plurality of extraction devices serves to multiply the effect of the extraction device in removing the article from the cavity. It would have been obvious to one of ordinary skill in the art to modify Catinella with a plurality of extraction devices in the stationary mold section to allow for multiple articles to be extracted at once.

Diamond teaches the extraction device (118) that has a shoulder (120) that meets the ledge (149) of the stationary mold section (164).

It would have been obvious to one of ordinary skill in the art to modify Catinella with a shoulder and ledge as taught by Diamond because it would prevent flash from occurring where the extraction member meets the cavity.

Response to Arguments

8. Applicant's arguments, see Request for Reconsideration, filed 7/20/04, with respect to the stationary mold halves have been fully considered and are persuasive. The rejection of claims 1-20 has been withdrawn.

However, the claims are now rejected in light of the new Examiner's interpretation of the claims. The arguments concerning the manually operated extraction member have been considered but are not persuasive.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel S. Luk whose telephone number is (571) 272-1134. The examiner can normally be reached on Monday-Thursday 7 to 4 and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on (571) 272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EL


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